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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,267	02/02/2001	James J. Fallon	8011-15	9730
22150	7590	10/25/2004	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			SURYAWANSHI, SURESH	
			ART UNIT	PAPER NUMBER
			2115	

DATE MAILED: 10/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/776,267	FALLON ET AL.	
	Examiner	Art Unit	
	Suresh K Suryawanshi	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/16/04 amendments.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,9,10,12,13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9,10,12,13 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) • | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-2, 4-7, 9-10, 12-13 and 15 are presented for examination.

Drawings

2. This application, filed under former 37 CFR 1.60, lacks formal drawings. The informal drawings filed in this application are acceptable for examination purposes. When the application is allowed, applicant will be required to submit new formal drawings. In unusual circumstances, the formal drawings from the abandoned parent application may be transferred by the grant of a petition under 37 CFR 1.182.

Claim Objections

3. Claim 13 is objected to because of the following informalities: "Original" should be replaced with "Currently amended" as the claim has been amended. Appropriate correction is required.

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 4-7, 9-10, 12-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krockner et al (US Patent no 6,073,232) in view of Esfahani et al (US Patent no 6,434,695 B1).

6. As per claim 1, Krockner et al teach

maintaining a list of boot data used for booting a computer system [col. 2, lines 30-47; col. 5, lines 1-7; a prefetch table containing a listing of the disk locations and length of data records that were requested by the host computer in the immediately previous power-on/reset];

preloading the boot data upon initialization of the computer system [col. 2, lines 36-41; col. 3, lines 30-39; col. 5, lines 17-21; data is preloaded into the RAM cache according to the prefetch table]; and

servicing requests for boot data from the computer system using the preloaded boot data [col. 2, lines 41-47; col. 3, lines 30-39; data is communicated from the cache to the host computer].

Krocker et al do not disclose about accessing compressed boot data and decompressing the compressed boot data. However, Esfahani et al clearly disclose about loading a compressed boot data into a RAM cache and then the boot data is decompressed and executed [col. 2, lines 5-13, 63, 67; col. 10, line 65 – col. 11, line 4]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to minimize a computer's initial program load time or shortening the load time of the computer programs from a hard disk drive to a host computer. Moreover, the shortening load time method of Krocker et al by loading the program codes into the RAM cache according to the prefetch table will definitely be benefited with the method of reading compressed data into the RAM cache and then decompressing and executing as needed. This way, one may not only have needed data into a fast access memory but also a large amount of data to avoid frequent accessing the storage device(s).

7. As per claim 2, Krocker et al teach that the boot data comprises program code associated with one of an operating system of the computer system, an application program, and a combination thereof [col. 5, lines 41-51; requesting data records are part of a computer program such as DOS or Windows].

8. As per claim 4, Krocker et al teach that the method steps are performed by a data storage controller connected to the boot device [fig. 1; controller].

9. As per claim 5, Krocker et al teach the step of updating the list of boot data during the boot process [col. 8, lines 63-65; the prefetch table is updated].

10. As per claim 6, Krocker et al teach the step of updating comprises adding to the list any boot data requested by the computer system not previously stored in the list [col. 8, lines 63-68; the prefetch table is updated].

11. As per claim 7, Krocker et al teach that the step of updating comprises removing from the list any boot data previously stored in the list and not requested by the computer system [col. 8; lines 63-65; updating the prefetch table].

12. As per claims 9 and 12, Krocker et al teach that the method steps are program instructions that are tangibly embodied on a program storage device and readable by a machine to execute the method steps [col. 9, lines 27-30; computer program].

13. As per claim 10, Krocker et al teach

maintaining a list of application data associated with an application program [col. 11; lines 30-34; a prefetch table containing disk storage location and length of the data records requested by the application program];

preloading the application data upon launching the application program [col. 11, lines 46-50; preloading the data cache prior to receiving a read command from the application]; and

servicing requests for application data from a computer system using the preloaded application data [col. 11, lines 51-57; communicating the prestored data records of the application from the data cache to the host computer].

Krockner et al do not disclose about accessing compressed data and decompressing the compressed data. However, Esfahani et al clearly disclose about loading a compressed data into a RAM cache and then the compressed data is decompressed and executed [col. 2, lines 5-13, 63, 67; col. 10, line 65 – col. 11, line 4]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to minimize a computer's initial program load time or shortening the load time of the computer programs from a hard disk drive to a host computer. Moreover, the shortening load time method of Krockner et al by loading the program codes into the RAM cache according to the prefetch table will definitely be benefited with the method of reading compressed data into the RAM cache and then decompressing and executing as needed. This way, one may not only have needed data into a fast access memory but also a large amount of data to avoid frequent accessing the storage device(s).

14. As per claim 13, Krocker et al teach

a digital signal processor (DSP) [fig. 1; host computer];

a programmable logic device [fig. 1, disk], wherein the programmable logic device is programmed by the digital signal processor [fig. 1; host computer] to (i) instantiate a first interface for operatively interfacing the boot device controller to a boot device [fig. 1; controller] and to (ii) instantiate a second interface for operatively interfacing the boot device controller to the host system [inherent to the system as a bus interface is used to interface the controller with host computer]; and

a non-volatile memory device [fig. 1; disk;], for storing logic code associated with the DSP, the first interface and the second interface, wherein the logic code comprises instructions executable by the DSP for maintaining a list of boot data used for booting the host system [col. 5, lines 1-7; a prefetch table is read from a reserved area of the disks], preloading the boot data upon initialization of the host system [col. 2, lines 36-41; col. 3, lines 30-39; col. 5, lines 17-21; data is preloaded into the cache according to the prefetch table], and servicing requests for boot data from the host system using the preloaded boot data [col. 2, lines 41-47; col. 3, lines 30-39].

Krocker et al do not disclose about accessing compressed boot data and decompressing the compressed boot data. However, Esfahani et al clearly disclose about loading a compressed boot data into a RAM cache and then the boot data is decompressed and executed [col. 2, lines 5-

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13, 63, 67; col. 10, line 65 – col. 11, line 4]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to minimize a computer's initial program load time or shortening the load time of the computer programs from a hard disk drive to a host computer. Moreover, the shortening load time method of Krockner et al by loading the program codes into the RAM cache according to the prefetch table will definitely be benefited with the method of reading compressed data into the RAM cache and then decompressing and executing as needed. This way, one may not only have needed data into a fast access memory but also a large amount of data to avoid frequent accessing the storage device(s).

15. As per claim 15, Krockner et al teach that the logic code in the non-volatile memory device further comprises program instructions executable by the DSP for maintaining a list of application data associated with an application program [col. 11; lines 30-34; a prefetch table containing disk storage location and length of the data records requested by the application program]; preloading the application data upon launching the application program [col. 11, lines 46-50; preloading the data cache prior to receiving a read command from the application], and servicing requests for the application data from the host system using the preloaded application data col. 11, lines 51-57; communicating the prestored data records of the application from the data cache to the host computer].

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). The practice of automatically extending the shortened statutory period an additional month upon the filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 CFR 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suresh K Suryawanshi whose telephone number is 571-272-3668. The examiner can normally be reached on 9:00am - 5:30pm.

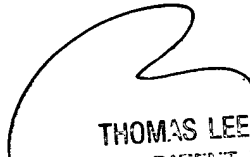
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sks

October 18, 2004


THOMAS LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100